

INCH-POUND

A-A-59861

17 March 2010

## COMMERCIAL ITEM DESCRIPTION

## FIXTURE, ENGINE MAINTENANCE, AIRCRAFT

The General Services Administration has authorized the use of this commercial item description (CID), for all federal agencies.

1. Scope. This commercial item description is for Remote Engine Trimmer Set for the TF39 engine. The set should meet form, fit and function as follows, except with specific approval of the Government.

2. SALIENT CHARACTERISTICS.

2.1 Capabilities. All of the following requirements shall be met or exceeded.

2.1.1 Intended use. The Item shall be capable of use in conjunction with existing airframes and test cells to trim the engine pressure ratio (EPR) and variable stator vane (VSV) angle (Beta 2) on the main fuel control.

2.1.2 Monitor capabilities. The item shall monitor and display the Compressor Inlet Temperature (T2C), the VSV Beta Angle, Turbine Inlet Temperature (TIT) and either Core Engine RPM (N2) or Fan RPM (N1) during the trim operation. These readings shall stabilize within 3 seconds of the initial reading.

2.1.3 T2C. T2C shall be read in degrees Celsius and have a display range of -73.3 to +110.0 degrees C in increments of 0.1 degrees C. The accuracy shall be to within  $\pm 0.5$  degrees C within an ambient temperature of -40 degrees C to +70 degrees C.

2.1.4 VSV beta angle. VSV Beta Angle shall read degrees of angle and have a display range of -5 to +45 degrees C in increments of 0.2 degrees C. Accuracy shall be to within  $\pm 0.2$  degrees C within an ambient temperature of -40 degrees C to +70 degrees C.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data that may improve this document should be sent to FSC: 4920 - 642 CBSG/GBEA, 460 Richard Ray Blvd, Suite 200, Robins AFB, GA 31098-1813. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.daps.dla.mil/online/>.

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2.1.5 TIT. TIT shall read in degrees C and have a display range of 0 to +1300 degrees C in 1 degree C increments. Accuracy shall be to within  $\pm 3$  degrees C within an ambient temperature of -40 degrees C to +70 degrees C.

2.1.6 N2. Core speed shall be in RPM and shall have a display range of 0 to 10,000 RPM in increments of 1 RPM. Accuracy shall be to within  $\pm 20$  RPM within an ambient temperature of -40 to +70 degrees C.

2.1.7 N1. Fan speed shall be in RPM and shall have a display range of 0 to 10,000 RPM in increments of 1 RPM. Accuracy shall be to within  $\pm 20$  RPM within an ambient temperature of -40 to +70 degrees C.

2.1.8 N1 and N2 selector switch. A selector switch or equivalent shall be provided to manually select the item (N1 or N2) to be displayed.

2.1.9 EPR increase/decrease switch and motor. An EPR Increase/Decrease switch or equivalent shall be provided to remotely operate the EPR motor for an increase or decrease in the EPR adjustment on the main fuel control. The EPR motor shall be mounted and secured with 12 point captive bolts.

2.1.10 VSV increase/decrease switch and motor. A VSV Increase/Decrease switch or equivalent shall be provided to remotely operate the VSV motor for an increase or decrease in the VSV adjustment on the main fuel control. The VSV motor shall be mounted and secured with 4 captive hex nuts.

2.1.11 Throttle rig pin. A throttle rig pin shall be remotely actuated from the control box or equivalent to lock the throttle at 90 degrees, thus allowing the adjustment of the EPR. An indicator light or equivalent shall illuminate when the pin is engaged.

2.1.12 Memory and printing. The item shall be able to store and print a minimum of 15 unique engine data sets to include the data monitored as defined in paragraph 2.1.2.

2.1.13 Mast assembly. A mast shall be installed on the blow-out door of the engine cowl to run any necessary cabling from the engine to the flight deck. The mast shall be sturdy enough to withstand the fan blast. Any cable fed through the mast shall be terminated with the appropriate connector. The cable assembly hanging down from the mast shall have a support grip to hold the weight of the cable.

2.1.14 Cable assemblies. All cable assemblies shall be field repairable. All connectors shall be replaceable. The cable assemblies that are exposed to the environment shall be capable of being used in an operational military environment to include rain, snow, desert, jungle and other elemental exposure.

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2.1.15 Hardware. All hardware used shall be commercially available off-the-shelf.

2.1.16 Input power. The item shall be rated for operation at 115VAC at a frequency range of 50 to 400 Hz. The item shall be fused and grounded with a separate ground conductor. The equipment chassis shall not be used as a conductor. The item shall have a power on indicator light or equivalent.

2.1.17 Calibration and maintenance adjustments. The design of the system shall provide for readily accessible calibration and maintenance adjustments. These adjustments shall be provided by variable value components which are adjustable by the use of common hand tools or without tools. The calibration by substitution of the selected components is unacceptable unless specifically approved by the Government. The calibration adjustments, wherever possible, shall be accessible without removal of the instrument case or modules. The calibration interval shall be a period of no less than one year based on an operating time of 2000 hours.

2.1.18 Built-in-test. The item shall contain a comprehensive built-in-test feature. When a fault is detected, the display shall indicate the circuit that has failed.

2.1.19 Storage. The item, including all cable assemblies and accessories, shall be stored in a container(s) that promotes ease of handling and can be carried by two people or less (paragraph 5.9.11.3.5 of MIL-STD-1472). The maximum number of containers allowed is three. Provisions shall be made for the retracting and storing of long cable assemblies (40 feet and longer).

### 3 REGULATORY REQUIREMENTS.

3.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

3.2 Green Procurement Program. Green Procurement Program (GPP) is a mandatory federal acquisition program that focuses on the purchase and use of environmentally preferable products and services. GPP requirements apply to all acquisitions using appropriated funds, including services and new requirements. FAR 23.404(b) applies and states the GPP requires 100% of EPA designated product purchase that are included in the Comprehensive Procurement Guidelines list that contains recovered materials, unless the item cannot be acquired: a) competitively within a reasonable timeframe; b) meet appropriate performance standards, or c) at a reasonable price. The prime contractor is responsible for ensuring that all subcontractors comply with this requirement.

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3.2 Ozone depleting chemicals or substances (ODC/ODS). The manufacture of this item, for use by the government, shall not use ODC/ODS without written justification for the requirement of ODC/ODS included with the response to any solicitation or request for quote, nor without specific authorization from the Government. If ODC/ODS are not used in the manufacture of the item, responses to solicitations or requests for quote, shall include a statement to that effect.

## 4.0 PRODUCT CONFORMANCE PROVISIONS

4.1 Product conformance. The products provided shall meet the salient characteristics of the CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance. Proof of conformance may include, but shall not be limited to the performance of operational tests, lab tests, modeling and simulation and delivery of reports and data from these tests.

4.2 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices, and is the same product offered for sale in the commercial marketplace. The Government reserves the right to request that the contractor proof of such conformance prior to first delivery and thereafter.

## 5.0 PACKING

5.1 Preservation, packing, labeling, and marking. Shall meet requirements as specified in the contract or order.

5.2 Packaging and marking. In the absence of specific instructions in the contract or order, the manufacturer's standard commercial packaging and marking practices will be used.

5.3 Unique identification (UID). The RPTS shall be uniquely identified. The markings shall meet MIL-STD-130 requirements.

## 6.0 NOTES

6.1 Required modification. The technical proposal should include drawings, sketches, and other technical data to describe the modifications required for this application.

6.2 Source of documents.

6.2.1 Military Specifications, Standards, and Handbooks referenced herein may be obtained at <https://assist.daps.dla.mil/online/> . or available from the Standardization Documents Order Desk, 700 Robbins Ave, Bldg 4, Section D, Philadelphia, PA 19111-5094.

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6.2.2 FAR and DFARS may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Electronic copies of the FAR may be obtained from <https://www.acquisition.gov/far/> . Electronic copies of the DFARS may be obtained from <http://www.acq.osd.mil/dpap/dars/dfars/index.htm> .

### 6.3 Key Words

Remote  
TF39  
Trim pressure ratio

### MILITARY INTERESTS:

Custodians:  
Air Force – 84

Preparing Activity:  
Air Force – 84

Reviewers:  
Air Force – 99

Agent:  
Air Force – 99

(Project 4920-2010-002)

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